

WHAT IS CLAIMED IS:

1 1. For use with a two-way wireless messaging system, an
2 application controller distributed, at least in part, among a
3 plurality communication units associated with said two-way
4 wireless messaging system, said application controller capable
5 of controlling cooperative communication among ones of said
6 plurality of communication units in accordance with a prescribed
7 application task, said application controller comprising:

8 ✓ a first communication unit controller that senses
9 change in a characteristic monitored at a first communication
10 unit, said monitored characteristic evaluated in accordance with
11 said prescribed application task, and, in response thereto,
12 automatically causes said first communication unit to transmit
13 a first data signal;

14 ✓ an operations controller that analyzes said first data
15 signal in accordance with said prescribed application task using
16 at least one subscriber profile, and, in response thereto,
17 causes a second data signal to be communicated automatically to
18 at least a second communication unit; and

19 a second communication unit controller that
20 automatically analyzes said second data signal at said second
21 communication unit, and, in response thereto, transmits an
22 acknowledgment signal to at least said first communication unit.

1 2. The application controller set forth in Claim 1 wherein
2 said two-way wireless messaging system includes at least one
3 base station that communicates with at least one of said first
4 communication unit and said second communication unit.

1 3. The application controller set forth in Claim 2 wherein
2 said at least one base station comprises:

3 a transmitter that is capable of transmitting messages
4 in a forward-channel having a first frequency range;

5 a receiver that is capable of receiving messages in a
6 reverse-channel having a second frequency range; and

7 an antenna that is capable of transmitting said
8 forward-channel messages at a first angle of electrical downtilt
9 below horizon and receiving said reverse-channel messages at a
10 second angle of electrical downtilt, wherein said second angle
11 of electrical downtilt is less than said first angle of
12 electrical downtilt.

1 4. The application controller set forth in Claim 1 wherein
2 said second data signal is communicated automatically to said
3 second communication unit and at least a third communication
4 unit.

1 5. The application controller set forth in Claim 4 wherein
2 said second data signal is communicated concurrently to said
3 second communication unit and said third communication unit.

1 6. The application controller set forth in Claim 4 wherein
2 said second communication unit transmits said acknowledgment
3 signal to said first communication unit and said third
4 communication unit.

1 7. The application controller set forth in Claim 6 wherein
2 said acknowledgment signal is transmitted concurrently to said
3 first communication unit and said third communication unit.

1 8. The application controller set forth in Claim 1 wherein
2 said prescribed application task is one of a calendering task,
3 an environmental monitoring task, an automation task, and a
4 security task.

1 9. The application controller set forth in Claim 4 wherein
2 said prescribed application task is one of a calendering task,
3 an environmental monitoring task, an automation task, and a
security task.

1 11. For use with a two-way wireless messaging system, an
2 application controller distributed among at least three
3 communication units associated with said two-way wireless
4 messaging system, said application controller capable of
5 controlling cooperative communication among said at least three
6 communication units in accordance with a prescribed application
7 task, said application controller comprising:

8 a first communication unit controller that:

9 senses change in characteristics monitored at a
10 first communication unit, said monitored characteristics
11 evaluated in accordance with said prescribed application
12 task, and

13 causes automatically, in response to one of said
14 monitored characteristics exceeding an associated
15 threshold, said first communication unit to transmit a
16 first data signal;

17 an operations controller that analyzes said first data
18 signal in accordance with said prescribed application task using
19 a subscriber profile, and, in response thereto, causes a second
20 data signal to be communicated automatically to at least a
21 second communication unit and a third communication unit; and

22 a communication unit controller that automatically
23 analyzes said second data signal at each of said second

24 communication unit and said third communication unit, and, in
25 response thereto, transmits an acknowledgment signal to at least
26 said first communication unit.

1 12. The application controller set forth in Claim 11
2 wherein said two-way wireless messaging system includes at least
3 one base station that communicates with at least one of said at
4 least three communication units.

1 13. The application controller set forth in Claim 12
2 wherein said at least one base station comprises:

3 a transmitter that is capable of transmitting messages
4 in a forward-channel having a first frequency range;

5 a receiver that is capable of receiving messages in a
6 reverse-channel having a second frequency range; and

7 an antenna that is capable of transmitting said
8 forward-channel messages at a first angle of electrical downtilt
9 below horizon and receiving said reverse-channel messages at a
10 second angle of electrical downtilt, wherein said second angle
11 of electrical downtilt is less than said first angle of
12 electrical downtilt.

1 14. The application controller set forth in Claim 11

2 wherein said second data signal is communicated concurrently to
3 said second communication unit and said third communication
4 unit.

1 15. The application controller set forth in Claim 11
2 wherein said second communication unit transmits said
3 acknowledgment signal to said first communication unit and said
4 third communication unit.

1 16. The application controller set forth in Claim 11
2 wherein said prescribed application task is one of a calendaring
3 task, an environmental monitoring task, an automation task, and
4 a security task.

1 17. The application controller set forth in Claim 13
2 wherein said two-way wireless messaging system includes at least
3 one gateway that enables at least one of said at least three
4 communication units to communicate over said two-way wireless
5 messaging system using a computer network.

1 18. The application controller set forth in Claim 17
2 wherein said computer network is one of an intra network and the
3 Internet.

1 19. The application controller set forth in Claim 11
2 wherein said two-way wireless messaging system includes at least
3 two antennas, each capable of transmitting forward-channel
4 messages at a first angle of electrical downtilt below horizon
5 and receiving reverse-channel messages at a second angle of
6 electrical downtilt, wherein said second angles of electrical
7 downtilt are respectively less than said first angles of
8 electrical downtilt.

1 20. The application controller set forth in Claim 19
2 wherein at least one of said at least three communication units
3 is receiving forward-channel messages from a first one of said
4 two antennas while transmitting interleaved reverse-channel
5 messages to a second one of said two antennas, and said
6 operations controller controls communication with said at least
7 one of said communication units using said two antennas
8 cooperatively.

1 21. For use with a two-way wireless messaging system, a
2 method of operating an application controller that is
3 distributed, at least in part, among a plurality communication
4 units associated with said two-way wireless messaging system,
5 said application controller being capable of controlling
6 cooperative communication among ones of said plurality of
7 communication units in accordance with a prescribed application
8 task, said method of operation comprising the steps of:

9 sensing change in a characteristic monitored at a first
10 communication unit, said monitored characteristic evaluated in
11 accordance with said prescribed application task;

12 causing, in response thereto, said first communication
13 unit to transmit automatically a first data signal;

14 remotely analyzing said first data signal in accordance
15 with said prescribed application task using at least one
16 subscriber profile, and causing, in response thereto, a second
17 data signal to be communicated automatically to at least a
18 second communication unit;

19 automatically analyzing said second data signal at said
20 second communication unit; and

21 transmitting, in response thereto, an acknowledgment
22 signal to at least said first communication unit.

1 22. The method of operation set forth in Claim 21 wherein
2 said two-way wireless messaging system includes at least one
3 base station and said method of operation comprises a further
4 step of communicating with at least one of said first
5 communication unit and said second communication unit using said
6 base station.

1 23. The method of operation set forth in Claim 22 wherein
2 said at least one base station comprises an antenna, and said
3 method of operation comprises the steps of:

4 transmitting forward-channel messages from said antenna
5 at a first angle of electrical downtilt below horizon; and

6 receiving reverse-channel messages at said antenna at
7 a second angle of electrical downtilt, wherein said second angle
8 of electrical downtilt is less than said first angle of
9 electrical downtilt.

1 24. The method of operation set forth in Claim 21 wherein
2 said two-way wireless messaging system includes two antennas,
3 each antenna capable of transmitting forward-channel messages at
4 a first angle of electrical downtilt below horizon and receiving
5 reverse-channel messages at a second angle of electrical
6 downtilt, said second angles of electrical downtilt are

7 respectively less than said first angles of electrical downtilt,
8 said method of operation comprising the steps of:

9 receiving at one of said first communication unit and
10 said second communication unit forward-channel messages from a
11 first antenna;

12 transmitting from said one of said first communication
13 unit and said second communication unit reverse-channel messages
14 to a second antenna; and

15 controlling communication with said one of said first
16 communication unit and said second communication unit using said
17 two antennas cooperatively.

1 25. The method of operation set forth in Claim 21 further
2 comprising the step of communicating automatically said second
3 data signal to said second communication unit and at least a
4 third communication unit.

1 26. The method of operation set forth in Claim 25 further
2 comprising the step of communicating concurrently said second
3 data signal to said second communication unit and said third
4 communication unit.

1 27. The method of operation set forth in Claim 25 further

2 comprising the step of transmitting said acknowledgment signal
3 from said second communication unit to said first communication
4 unit and said third communication unit.

1 28. The method of operation set forth in Claim 27 further
2 comprising the step of transmitting concurrently said
3 acknowledgment signal to said first communication unit and said
4 third communication unit.

1 29. The method of operation set forth in Claim 21 wherein
2 said prescribed application task is one of a calendaring task,
3 an environmental monitoring task, an automation task, and a
4 security task.

1 30. The method of operation set forth in Claim 25 wherein
2 said prescribed application task is one of a calendaring task,
3 an environmental monitoring task, an automation task, and a
4 security task.

1 31. The method of operation set forth in Claim 21 further
2 comprising the step of maintaining said at least one subscriber
3 profile in a data repository associated with said two-way
wireless messaging system.

1 32. For use with a two-way wireless messaging system, a
2 method of operating an application controller that is
3 distributed, at least in part, among at least three
4 communication units associated with said two-way wireless
5 messaging system, said application controller being capable of
6 controlling cooperative communication among said at least three
7 communication units in accordance with a prescribed application
8 task, said method of operation comprising the steps of:

9 sensing change in characteristics monitored at a first
10 communication unit using a first communication unit controller,
11 said monitored characteristics evaluated in accordance with said
12 prescribed application task;

13 automatically causing, in response to one of said
14 monitored characteristics exceeding an associated threshold,
15 said first communication unit to transmit a first data signal;

16 analyzing said first data signal in accordance with
17 said prescribed application task using an operations controller
18 in association with a subscriber profile, and, in response
19 thereto, causing a second data signal to be communicated
20 automatically to at least a second communication unit and a
21 third communication unit; and

22 automatically analyzing said second data signal at each
23 of said second communication unit and said third communication

24 unit using a communication unit controller, and, in response
25 thereto, transmitting an acknowledgment signal to at least said
26 first communication unit.

1 33. The method of operation set forth in Claim 32 wherein
2 said two-way wireless messaging system includes at least one
3 base station, and said method of operation further comprises the
4 step of communicating with at least one of said at least three
5 communication units using said base station.

1 34. The method of operation set forth in Claim 33 wherein
2 said at least one base station comprises an antenna, and said
3 method of operation comprises the steps of:

4 transmitting forward-channel messages from said antenna
5 at a first angle of electrical downtilt below horizon; and

6 receiving reverse-channel messages at said antenna at
7 a second angle of electrical downtilt, wherein said second angle
8 of electrical downtilt is less than said first angle of
9 electrical downtilt.

1 35. The method of operation set forth in Claim 32 further
2 comprising the step of communicating said second data signal
3 concurrently to said second communication unit and said third

4 communication unit.

1 36. The method of operation set forth in Claim 32 further
2 comprising the step of transmitting said acknowledgment signal
3 from said second communication unit to said first communication
4 unit and said third communication unit.

1 37. The method of operation set forth in Claim 32 wherein
2 said prescribed application task is one of a calendering task,
3 an environmental monitoring task, an automation task, and a
4 security task.

1 38. The method of operation set forth in Claim 34 wherein
2 said two-way wireless messaging system includes at least one
3 gateway, and said method of operation further comprises the step
4 of using said at least one gateway to enable at least one of
5 said at least three communication units to communicate over said
6 two-way wireless messaging system using a computer network.

1 39. The method of operation set forth in Claim 38 wherein
2 said computer network is one of an intra network and the
3 Internet.

1 40. The method of operation set forth in Claim 32 wherein
2 said two-way wireless messaging system includes two antennas,
3 each antenna capable of transmitting forward-channel messages at
4 a first angle of electrical downtilt below horizon and receiving
5 reverse-channel messages at a second angle of electrical
6 downtilt, said second angles of electrical downtilt are
7 respectively less than said first angles of electrical downtilt,
8 said method of operation comprising the steps of:

9 receiving at one of said three communication units
10 forward-channel messages from a first antenna;

11 transmitting from said one of said three communication
12 units reverse-channel messages to a second antenna; and

13 controlling communication with said one of said three
14 communication units using said two antennas cooperatively.